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10/799,871	03/12/2004	David A. Pintsov	11JN-123385	6131
30764 7590 11/05/2007 SHEPPARD, MULLIN, RICHTER & HAMPTON LLP 333 SOUTH HOPE STREET 48TH FLOOR LOS ANGELES, CA 90071-1448			EXAMINER RASHID, DAVID	
			ART UNIT 2624	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/799,871

Applicant(s)

PINTSOV ET AL.

Examiner

David P. Rashid

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to the claim and specification amendment received on 10/15/2007. **Claims 1 – 22** remain pending.

Claim Objections

2. The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

3. **Claims 1 – 22** are objected to under 37 CFR 1.75(a), as failing to conform to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

(i) Claim 1, line 12 cites “the template” but it is unclear whether the template is the “document template” or the “appropriate template” – it is suggested to change to “the appropriate template”. An equivalent argument applies to claims 10 and 16.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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5. The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

6. **Claims 16 – 22** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. **Claims 16 – 22** define "[a] computer program" embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed "computer program" can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-

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readable medium” or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1 – 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stolfo (US 5,668,897 A) in view of Krouse et al. (US 6,097,834 A).

Regarding **claim 1**, while Stolfo discloses a method of automatically selecting document templates (FIG. 4; Col. 1, lines 17 – 25), comprising the steps of:

presenting a document image from an account (Col. 17, lines 56 – 61; FIG. 4, element 58);

matching (FIG. 1, elements 3, 5) the document image against a series of known document templates from the account (“matching” and “codebook of templates” in Col. 15, lines 5 – 14; FIG. 4, element 62), each document template including information about a unique layout of a particular document image (“...each record has unique elements...that distinguishes one record from another.” in Col. 15, lines 17 – 23; Col. 15, lines 46 – 51) to allow that particular document to be identified (FIG. 6, elements 102 through 122) and information in that particular document to be identified and read (“Y” from elements 108, 112, 118 in FIG. 6);

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producing confidence scores corresponding to the degree of similarity of the document image compared to each document template (Col. 14, lines 59 – 62, Col. 22, lines 42 – 50); and searching the document for distinctive features (the features of a check listed in Col. 17, lines 23 – 54 (e.g. signature, date, etc)) and matching the document to an appropriate template (“matching” and “codebook of templates” in Col. 15, lines 5 – 14; FIG. 4, element 62), Stolfo does not teach using the appropriate template to identify a location on the document to look for information that is desired during document processing.

Krouse discloses a financial transaction processing method (FIG. 7) that teaches searching a document (“check” in Col. 7, line 32 – 53; “bill document” in Col. 16, lines 43 – 59) for distinctive features (“recognition characteristics from the scanned image” in Col. 4, lines 18 – 39; “standardized portion” in Col. 7, line 32 – 53) and matching the document to an appropriate template (“based upon the one respective format when the particular format is determined to match the one respective format” in Col. 4, lines 18 – 39 wherein the template is the “one respective format”); and

using the template to identify a location on the document to look for information that is desired during document processing (“determining, based upon the one respective format....location of a field in the scanned image to which optical character recognition (OCR) may be applied to generate the transaction-related information” in Col. 4, lines 18 – 39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the identifying code of Stolfo to include the distinctive features as taught by Krouse AND the appropriate template of Stolfo (“matching” and “codebook of templates” in Col. 15, lines 5 – 14; FIG. 4, element 62) to be used in such a way as to identify the location on

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the document to look for information (the signature, date, etc of Stolfo in FIG. 4) that is desired during document processing as taught by Krouse as “[a]dvantageously, the system and method of the first aspect of the present invention permit negotiable instruments payments tendered at a point of sale to be "converted" into legally binding equivalent EFT and/or ACH transactions, thereby overcoming the aforesaid and other disadvantages and drawbacks associated with tender of negotiable instruments payments at point of sale and unauthorized conversion of same into equivalent EFT and/or ACH transactions. Also advantageously, the system and method of the second aspect of the present invention require less human interaction, are less prone to human operator errors, and are faster in operation than the aforesaid conventional computer programs for electronically paying bills, and are able to properly recognize and process transaction documents having different respective format types.”, Krouse, Col. 4, line 58 – Col. 5, line 5.

Regarding **claims 2 and 3**, while Stolfo in view of Krouse discloses the method of claim 1, Stolfo further comprises the step of matching the confidence scores with a predetermined high similarity threshold (Referring to FIG. 6, the check image undergoes the step of searching a database (106) in search for either a complete match (108), a match within tolerance (112), or a match of any combination of patterns (118). “The input image is deemed to be a match whenever the distance is less than a preestablished threshold (λ).”, column 3, line 28. It can be inferred that a high similarity threshold is when the calculated distance is less than (considered “above” when negating) a pre-established λ (step 108 or 112).).

Regarding **claim 4**, while Stolfo in view of Krouse discloses the method of claim 1, Stolfo further comprises the step of matching the confidence score with a predetermined low similarity threshold (The high similarity threshold as disclosed in Stolfo can also constitute a low

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similarity threshold also if any calculated lambda value is greater than (considered “below” when negating) a pre-established lambda as discussed above (step 118)).

Regarding **claim 5**, while Stolfo in view of Krouse discloses the method of claim 4, Stolfo further comprises the step of creating a new document template for the account corresponding to the document image if the confidence score is below the predetermined low similarity threshold (FIG. 6, reference numeral 124 shows that a background of the check image below the pre-established lambda value is compressed. In addition, “It is another object of the present invention to provide variable-size or scaled check images retained on storage media, including decompression by utilizing codebook code to render full color and faithful reproductions of archived check images.”, column 11, line 42, and thus it can be inferred that if the check image in question has been compressed into the memory for future decompression when exerting the algorithm, a new document template for the account has been produced.).

Regarding **claim 6**, while Stolfo in view of Krouse discloses the method of claim 4, Stolfo further comprises the step of applying a partial layout comparison to the image and the closest matching template if the confidence score is above the low similarity threshold (Other than the background pattern template comparison as discussed above, FIG. 4 shows a signature comparison as well. Because of these two separate databases and comparisons, the background pattern template comparison (having FIG. 6 in more detail) can be considered a partial layout comparison of the check as a whole. It has already been discussed above that if the confidence score and the low similarity threshold is equivalent to the high similarity threshold (Case 1), being above the low similarity threshold is equivalent to the high similarity threshold range as already discussed in claim 3.).

Regarding **claim 7**, while Stolfo in view of Krouse discloses the method of claim 6, Stolfo further comprises the step of providing results of the partial layout comparison including a list of image parts and a corresponding confidence score for each image part (Other than the background pattern template comparison as discussed above, FIG. 4 shows a signature comparison as well. “In one embodiment according to the present invention, the payor's signature on the check 50 is verified for authenticity by comparing it with a database of signatures 84 including a representation of the signature of the drawer. If the signature does not match a corresponding signature in the database 86, the bank operator needs to be informed for manual verification and the possibility of a possible fraudulent check 88.”, column 26, line 66. It is inherent that comparing a signature to signatures in a database requires some threshold or confidence score.).

Regarding **claim 8**, while Stolfo in view of Krouse discloses the method of claim 7, Stolfo further comprises the step of creating one or more exclusion zones corresponding to image parts that exhibit a low confidence score (FIG. 4, elements 88, 66, 94 such that “exclusion zones” are those actions taken if the image part of the check does not match within a pre-established threshold for questioning the authenticity of the check, as the checks are “excluded” from further processing).

Regarding **claim 9**, claim 9 recites identical features as in claim 1. Thus, arguments equivalent to that presented above for claim 1 are equally applicable to claim 9.

Regarding **claim 10**, claim 10 recites identical features as in claims 1, 2, 4, and 9. Thus, arguments equivalent to that presented above for claims 1, 2, 4 and 9 are equally applicable to claim 10.

Regarding **claim 11**, claim 11 recites identical features as in claim 3. Thus, arguments equivalent to that presented above for claim 3 is equally applicable to claim 11.

Regarding **claim 12**, claim 12 recites identical features as in claim 5. Thus, arguments equivalent to that presented above for claim 5 is equally applicable to claim 12.

Regarding **claim 13**, claim 13 recites identical features as in claim 6. Thus, arguments equivalent to that presented above for claim 6 is equally applicable to claim 13.

Regarding **claim 14**, claim 14 recites identical features as in claim 7. Thus, arguments equivalent to that presented above for claim 7 is equally applicable to claim 14.

Regarding **claim 15**, claim 15 recites identical features as in claim 8. Thus, arguments equivalent to that presented above for claim 8 is equally applicable to claim 15.

Regarding **claims 16 and 22**, claims 16 and 22 recites identical features as in claims 1, 2, 4 and 9. Thus, arguments equivalent to that presented above for claims 1, 2, 4 and 9 are equally applicable to claims 16 and 22 in addition to performing the method using a computer program and machine readable instructions as disclosed: "Thus, the invention includes, as a feature, the creation and maintenance of a codebook library of scanned check information, in a suitable storage form, e.g. actual image or compressed image data of various resolutions, that can be used to regenerate the actual image data, through the use of an algorithm executed by a computer or a series of mathematical equations that can compare the features and relationships (e.g. geometric) between the codebook and the actual regenerated image.", Stolfo, Col. 9, line 3.

Regarding **claim 17**, claim 17 recites identical features as in claim 3. Thus, arguments equivalent to that presented above for claim 3 is equally applicable to claim 17.

Regarding **claim 18**, claim 18 recites identical features as in claim 5. Thus, arguments equivalent to that presented above for claim 5 is equally applicable to claim 18.

Regarding **claim 19**, while Stolfo in view of Krouse discloses the computer program of claim 16, Stolfo further comprises machine readable instructions for applying a partial layout comparison to the document image and the closest matching document template if the confidence score is above the low similarity threshold and below the high similarity threshold (FIG. 6 again shows the background portion of the check being compared to database templates (partial layout comparison) for both the low and high similarity threshold comparisons against the confidence score. Arguments equivalent to that presented above for claims 3 and 5 is equally applicable to claim 19 since the low and high similarity threshold comparisons are equivalent in Case 1.).

Regarding **claim 20**, claim 20 recites identical features as in claim 7. Thus, arguments equivalent to that presented above for claim 7 is equally applicable to claim 20.

Regarding **claim 21**, claim 21 recites identical features as in claim 8. Thus, arguments equivalent to that presented above for claim 8 is equally applicable to claim 21.

Response to Arguments

9. Applicant's arguments filed on 10/15/2007 with respect to **claims 1 – 22** have been respectfully and fully considered, but are not found persuasive.

10. **Summary of Remarks regarding claims 1, 10, and 16:**

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Applicant argues although Stolfo teaches a plurality of records where each record's "identifying code" may allow a particular document's background to be identified for the purpose of subtracting the background from an image to allow for compression, Stolfo fails to teach searching a record for distinctive features and matching the record to an appropriate template. Moreover, Stolfo fails to provide a teaching that a selected template is used to identify a location on the record to look for information that is desired during document processing, as required by the independent claims, as amended.

Applicant also respectfully submits that Stolfo does not disclose that each record contains information about a unique layout to allow the document itself to be identified and information in that particular document to be identified and read. The "collection of identifiers" in the Stolfo records only distinguishes the records from each other, and has no role in identifying a particular document or allowing information in a particular document to be identified and read. Although Stolfo teaches that information, such as a signature from a document/check, may be identified, the records of Stolfo themselves do not include information about a unique layout to allow information in a particular document to be identified and read, as would be required by claims 1, 10, and 16. Rather, Stolfo teaches that the information is obtained from the remainder after the records are used to subtract the document background away. Accordingly, Stolfo does not teach each and every element of the invention recited in claims 1, 10 and 16 (*@ response page 9*).

11. Examiner's Response regarding claims 1, 10, and 16:

However, the added limitation of "searching the document for distinctive features and matching the document to an appropriate template" is strikingly similar to that already claimed and anticipated by Stolfo. Stolfo does in fact search the document for distinctive features as

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indicated by the features of a check listed in Col. 17, lines 23 – 54 (e.g. signature, date, etc in FIG. 4 after multiprocessing tasks element 74). Matching the document to an appropriate template has already been anticipated by Stolfo in “matching the document image against a series of known document templates” (“matching” and “codebook of templates” in Col. 15, lines 5 – 14; FIG. 4, element 62).

Though it is true Stolfo does not use the appropriate template to identify a location on the document to look for information that is desired during document processing, Krouse discloses a financial transaction processing method (FIG. 7) that teaches searching a document (“check” in Col. 7, line 32 – 53; “bill document” in Col. 16, lines 43 – 59) for distinctive features (“recognition characteristics from the scanned image” in Col. 4, lines 18 – 39; “standardized portion” in Col. 7, line 32 – 53) and matching the document to an appropriate template (“based upon the one respective format when the particular format is determined to match the one respective format” in Col. 4, lines 18 – 39 wherein the template is the “one respective format”); and using the template to identify a location on the document to look for information that is desired during document processing (“determining, based upon the one respective format....location of a field in the scanned image to which optical character recognition (OCR) may be applied to generate the transaction-related information” in Col. 4, lines 18 – 39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the identifying code of Stolfo to include the distinctive features as taught by Krouse AND the appropriate template of Stolfo (“matching” and “codebook of templates” in Col. 15, lines 5 – 14; FIG. 4, element 62) to be used in such a way as to identify the location on the document to look for information (the signature, date, etc of Stolfo in FIG. 4) that is desired

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during document processing as taught by Krouse as “[a]dvantageously, the system and method of the first aspect of the present invention permit negotiable instruments payments tendered at a point of sale to be "converted" into legally binding equivalent EFT and/or ACH transactions, thereby overcoming the aforesaid and other disadvantages and drawbacks associated with tender of negotiable instruments payments at point of sale and unauthorized conversion of same into equivalent EFT and/or ACH transactions. Also advantageously, the system and method of the second aspect of the present invention require less human interaction, are less prone to human operator errors, and are faster in operation than the aforesaid conventional computer programs for electronically paying bills, and are able to properly recognize and process transaction documents having different respective format types.”, Krouse, Col. 4, line 58 – Col. 5, line 5.

Stolfo in view of Krouse accordingly teach each and every element of the invention recited in claims 1, 10 and 16.

12. Summary of Remarks regarding claims 2 – 9, 11 – 15, and 17 – 22:

Applicant argues claims 2 – 9, 11 – 15, and 17 – 22 are distinguishable from Stolfo by virtue of their dependent on claims 1, 10 and 16 (*@ response page 10*).

13. Examiner’s Response regarding claims 2 – 9, 11 – 15, and 17 – 22:

However, it has been shown above that claims 1, 10, and 16 are anticipated by Stolfo in view of Krouse – thus dependent claims 2 – 9, 11 – 15, and 17 – 22 are not distinguishable from Stolfo in view of Krouse by virtue of their dependent on claims 1, 10 and 16.

14. Summary of Remarks regarding claims 8, 15, and 21:

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Applicant argues that the present invention's description of exclusion zone, however is different from the examiner's interpretation. Consequently, Stolfo fails to teach the creation of one or more exclusion zones corresponding to image parts that exhibit a low confidence score (*@ response page 10*).

15. **Examiner's Response** regarding **claims 8, 15, and 21**:

Though the applicant's interpretation of "exclusion zone" is different from that of the examiner's, claims 8, 15, and 21 have shown they can be read broadly enough to encompass both interpretations. The examiner has interpreted an exclusion zone that to be when the check is "excluded" from further processing due to the presence of potential fraudulent activity within the check document image, on the onset of a low confidence score (0% match or "No" to the answers within FIG. 4). This situation may arise on multiple occasions (or "zones") within the method of Stolfo, including identifying code, signature, and date matching.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

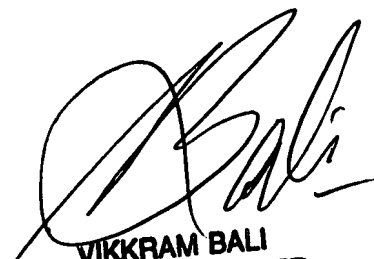
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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



VIKKRAM BALI
PRIMARY EXAMINER

/David P. Rashid/
Examiner, Art Unit 2624

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Examiner
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